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PSYCHOLOGY AND SCIENTIFIC METHODS

VALID KNOWLEDGE AND THE "SUBJECTIVITY OF EXPERIENCE"

"EXPERIENCE" seems to be in a perilous condition at present, philosophically speaking. When it is an affair of opposing apriorism or that phase of idealism which subsists by setting up "pure thought" and endowing it with various synthetic functions, many, if not most, contemporary writers profess an ardent attachment to experience. When the problem of the relation of knowledge and things is uppermost, many of the same writers express the most profound distrust of experience. When the logical origin of knowledge is under discussion, experience is a term broad enough to cover whatever is perceived and is inferred from the perceived, as well as all kinds of doing and suffering which affect what we know and yet are not themselves "known," *i. e.*, are not explicit objects of awareness. When epistemology comes to the front, experience dwindles down to the narrowest sensible content of presentation. That the idealist should accept the latter or Humian notion of experience is natural—he needs it in his business. But, somewhat surprisingly, most realists carry the same brand of experience in stock. The motive is not so clear as in the case of the idealist, but one surmises that the reason is the same as that of the objective idealist, only the other way around.

The objective idealist points to the contrast of the limitations of experience and the *ideal* of knowledge implied in limited experience as proof of the necessity of absorption of our knowing in a complete consciousness. The realist points to the contrast between our meager flickering awareness of objects and the extensive and enduring world of *actually* known objects as proof of the independence of the object of knowledge from momentary awareness—with which he, a good intellectualist, has, like the idealist, identified experience. And since the *ideal* of knowledge and the world of *actual* knowledge are quite different and yet are correlated, idealist

and realist, by standing upon the ground of the limited and subjective character of experience, keep each other going.

This last paragraph is, however, a diversion from the point of my paper which is to raise a doubt as to whether experience can have the relation it is conceded to have to the *production* of valid knowledge and yet be simply "subjective" in character. This doubt is here raised for the especial benefit of the realist. Experience can not, we are told, be an ultimate criterion, method or "universe of discourse"[1] in philosophy, without leading to a thoroughly subjectivistic philosophy—because experience is subjective. So be it. Then upon what grounds does realism itself rest? Is it a purely dialectical doctrine, one achieved through the elaboration—I will not say manipulation—of the *concept* of knowledge and allied concepts? Or, since presumably it is not a supernatural revelation, is it a "necessary truth," or an *a priori* intuition? Or does it rest upon empirical grounds and hope for empirical verification? And if so, what is its relation as a valid theory of knowledge to the experiences upon which it rests and to which it looks for confirmation?

Since the realist will not claim that his knowledge of the relation of knowledge to its object exhausts the genus "valid knowledge," the question may profitably be generalized: What is the relation of any case of valid knowledge *qua* valid, to experience? In considering this question, the reader may define "valid knowledge" in general in any way he pleases, for my question is not about the relation of the concept of valid knowledge to the concept of experience: the realist has already told us that there is no relation save that of indifference. My question is not as to implication or connotation, but is denotative in reference. What relation is there between what exists as a valid knowledge and what exists as empirical events? Even if it be admitted that the connotation of the term "valid knowledge" is "object known *as if* there were no knowing experience, no antecedents and (above all) no consequences in experience"; there still remains the question denotatively or existentially all-important: What is the evidence that any given case is an object so known?

The peculiarity to which I invite the realist's attention is that the method of guaranteeing a given object to be present as if there were no experience is itself a method of experience—a peculiar fact in any case, but excessively peculiar when the experience taken to warrant the belief that experience is ceasing from pernicious activity is defined in advance as subjective. To be a realist and to be immune from error in particular cases of knowing are not synonyms—which

[1] This excellent way of characterizing experience is Bush's; see this JOURNAL, Vol. VI., p. 175. *The Existential Universe of Discourse.*

is to say that to know what valid knowledge is is not necessarily to know what *a* valid knowledge is. Moreover, something is necessary to determine a case of valid knowledge besides the bare presence of the valid object. If this something else be not conditions and consequences in experience, what is it? Since, as the realist tells us, the object of knowledge is there anyway, what determines its presence as an object of valid knowledge must be something besides itself, or its fellow, or any collocation of its fellows, they being all in the same predicament as itself. And, alack and alas, that this something else required to secure and to guarantee the presence of an object as a valid object should be experience—which is subjective. If experience could be used only to account for error, what a convenience! That, being subjective, it has nothing to do with the valid object and yet is necessary to warrant it *as* valid, what an inconvenience!

For note what is required of this same subjective experience. It must catapult upon the scene an object, while (by a sort of rebound) it modestly withdraws far behind the scene. But this is not enough: The fact that invalid objects are accepted as valid proves that "experience" is frequently most perniciously active when it seems to have withdrawn its influence. Hence, in cases of genuinely scientific knowing, experience must affix to the object some *special* sign witnessing that this object is free from its own influence. This performance, on the assumption that experience is subjective, is as if suspected beef-packers substituted for the government inspection label a certificate that the meat was sound because they had done nothing to it—except produce it. But this is not all. Only certain modes of experience are efficacious in hitting upon the valid object; and the possibility of science, that is, directed search for (instead of their accidental finding) valid objects, depends upon ability to discover and confirm those modes of experience that are benign. Is it not extraordinary that experience—if it be inherently subjective—should possess this Manichæan cleavage within itself?

The fact that scientific method consists of preference for certain selected modes of experience as the likeliest way to secure valid objects is worthy of special attention. During the seventeenth century, the problem of the attainment of valid knowledge-objects became acute. Intellectualistic philosophers, rationalists and sensationalists alike, set to work to find some mark inhering in the valid object which should guarantee its validity. Some sought it in the sublimity or the clearness, or the universality of the content; others sought it in the object's simplicity, or brute irreducibility, or sensuousness. Experimental scientists said, in effect, that there was no trait or quality of the knowledge-object *per se* which marked its genuineness; that the status of genuineness is determined by the

way inquiry is conducted and by the way the thing looked upon as valid behaves in the carrying forward of inquiry. This doctrine, uniformly accepted, so far as I know, in the natural (if not the mathematical) sciences was summed up in the doctrine that knowledge depends upon experience and valid knowledge upon certain types of experience. Now if to *be* a valid knowledge means (1) to be got at through conditions and acts of doubt, suspense, observation, suggestion, experimental manipulation, hypothesis-formation and elaboration, application of mathematical calculations, and (2) to be capable of fruitful use in suggesting and regulating further inquiries, then surely it is a moderate statement to say that *some* experiences bear such an intimate relation to valid knowledge-objects that it taxes credulity to regard experience as inherently subjective.

The realist may reply that it is not denied that empirical conditions (or even consequences) are necessary to the appearance and recognition of the valid object. What we object to, he will say, is the implication that the conditions of the discovery of a valid object are conditions of its validity; we object to confusing conditions of genesis with conditions of validity. The reply is familiar, but not relevant. The realist's attention is invited to the highly intimate and pervasive connections that exist between empirical conditions of genesis and consequence and the valid status of an object; he is urged to tell what he means, in the light of this intimate connection, by calling the conditions of genesis and bearing "subjective," and how it is that the "subjective" can be responsible not only for generating the manifestation of the valid object, but also for stamping it as valid. The continuity of "experience" and of "validity" is at once so unbroken and so important as to render incredible the notion that genesis and consequence are in one realm—the subjective—and validity in another, the objective. In view of the facts of scientific procedure, it hardly seems excessive to say that, in one regard, validity of status *is* a kind of experience. If it can be made out that experience *is* subjective, we should not think we had achieved anything with a distinction of genesis and validity; we should say that because the generator is only subjective we can only laugh at the naïve audacity of its claim to generate a valid object. To dispose of the difficulty by drawing a hard and fast line between genesis and validity—or between psychological and logical—is to suppose that giving names to the terms of a problem solves the problem of which they are the named terms.

Scientific method carries us a step further as to this point also. In all the natural sciences, it has been found that the best way of defining the nature of an object is by following its career, its becoming and its behavior. Strange indeed would be the logical situa-

tion if in all specific cases of scientific conception we employed terms of generation and efficiency in order to secure valuable conceptions, but when we came to the conception of knowing itself found a unique exception—a complete irrelevance of genesis and content.

The realist professes to offer a valid conception of the nature of valid knowledge. He either arrives at this conception by a dialectic procedure or he follows the same methods that investigators employ in other fields. If the latter, the definition of valid knowledge as "knowledge as if experience were not there" is itself established by certain experiences. Is he not then a little ungrateful in his treatment of experience? Ungrateful or not, must he not admit that his process is either dialectical, or analogous to the procedure of scientific inquiries? If the latter, how can he frame his conception of valid knowledge save by generalization of denotative or existential cases of valid knowledge? If to be *a* valid knowledge means to stand in a particular empirical context, can valid knowledge be conceived except as an indicated type of empirical position and function?

To be more specific: Does a definition of valid knowledge have any *meaning*—to say nothing of validity—save as based upon the specific detectable traits of those instances of knowledge enterprises *that have turned out valid in contrast with those which have turned out invalid?* Does an epistemological definition of valid knowledge, in distinction from a logical definition, have *any* meaning at all? In short, is the realist a realist or is he merely an anti-idealist?

Without prejudice to the question of realism *vs.* idealism, another question is of much more import for the future of philosophy: Is the theory of knowledge to be epistemological or logical? Is it to be concerned with the nature of knowledge and of truth in general, that is, with conceptions which are totally irrelevant to the methods and tests by which particular knowledges are effected and particular truths tested? Or is the theory of knowledge to be a generalized statement of particular instances of knowing, and the theory of truth a generalized statement of particular instances of "trues"?

Because the empiricist believes *this* question is immeasurably more pregnant than the issue (*within* a pretended theory of knowledge in general) of idealism *versus* realism, he catches it from both sides. On account of the same belief, he takes his drubbings with equanimity, for he is convinced that the presuppositions which create the problem of knowledge in general are mere historic survivals, and that the future is with the question of the differences

between a good knowledge and a bad knowledge, not with the problem of knowledge *ueberhaupt*.

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WHAT SOCIAL OBJECTS MUST PSYCHOLOGY PRESUPPOSE?[1]

THERE is a persistent tendency among present-day psychologists to use consciousness as the older rationalistic psychology used the soul. It is spoken of as something that appears at a certain point, it is a something into which the object of knowledge in some sense enters from without. It is conceived to have certain functions—in the place of faculties. It is as completely separated from the physical body by the doctrine of parallelism as the metaphysical body was separated from the metaphysical soul by their opposite qualities.

Functional psychology has set itself the program of assimilating the purposive character of conscious processes—or of consciousness as it is termed—to the evolutionary conception of adaptation, but instead of making consciousness in human individuals a particular expression of a great process, as is demanded of a philosophy of nature, it comes in generally as a new and peculiar factor which even demands a new formula of evolution for its explanation; it involves a new evolution superinduced upon the old.

In spite of much philosophizing, consciousness is identified in current psychological practise with the field which is open to introspection, and the object of knowledge is placed within this field, and related to the physical world—spoken of as an external field of reality—by a parallelistic series. This psychological practise tends to accept the conceptual objects of science, the atoms, molecules, ether vortex rings, ions, and electrons, as the substantial realities of the physical world, and, by implication at least, to relegate the sensuous content of objects of direct physical experience to this separate field of consciousness. The old-fashioned idealist has then only to point out the thought structure of these hypothetical objects of science to sweep triumphantly, with one stroke of his wand, the whole world of nature within this limited field of the consciousness open to introspection. Whereupon the solipsistic spook arises again to reduce one's world to a nutshell.

The way out of these crude psychological conceptions, in my mind, lies in the recognition that psychical consciousness is a particular phase in development of reality, not an islanded phase of

[1] Given at the meeting of the Psychological Association in Boston, December 31, 1909.

reality connected with the rest of it by a one to one relationship of parallel series. This point of view I have elsewhere developed somewhat obscurely and ineffectually, I am afraid.[2]

What I wish to call to your attention in the few moments at my disposal, is another phase of this situation which is itself psychological in its character;[3] the presupposition of selves as already in existence before the peculiar phase of consciousness can arise, which psychology studies.

Most of us admit the reality of the objects of direct physical experience until we are too deeply entangled in our psychological analyses of cognition. Unless we subject ourselves to the third degree of criticism, the parallelism of which we speak lies between the processes of brain tissues which can be seen and smelt and handled and the states of consciousness which are conditioned by them. While this admission guarantees the physical bodies of our fellows as equally real, the self is relegated to the restricted field of introspected consciousness and enjoys not the reality of a so-called external object, but only that of a combination of states of consciousness. Into the existence of those states of consciousness in another, we are solemnly told we can only inferentially enter by a process of analogy from the relations of our own introspected states and the movements of our bodies to the movements of other bodies and the hypothetical conscious states that should accompany them. If we approach the self from within, our analysis recognizes, to be sure, its close relationship to, if not its identity with, the organization of consciousness, especially as seen in conation, in apperception, in voluntary attention, in conduct, but what can be isolated as self-consciousness as such reduces to a peculiar feeling of intimacy in certain conscious states, and the self gathers, for some unexplained reason, about a core of certain vague and seemingly unimportant organic sensations—a feeling of contraction in the brow, or in the throat, or goes out to the muscular innervations all over the body which are not involved directly in what we are doing or perceiving. And yet when we proceed introspectively the whole field of consciousness is ascribed to this self, for it is only in so far as we are self-conscious that we can introspect at all.

But what I wish to emphasize is that the other selves disappear as given realities even when we are willing to admit the real objects of physical experience. The self arises within the introspected field. It has no existence outside that introspected field, and other selves

[2] "The Definition of the Psychical," University of Chicago Decennial Volumes.

[3] I have discussed the implications of this position from a somewhat different point of view in the *Psychological Bulletin*, Vol. VI., No. 12, December 15, 1909.

are only projects and ejects of that field. Each self is an island, and each self is sure only of its own island, for who knows what mirages may arise above this analogical sea.

It is fair to assume that if we had exact social sciences which could define persons precisely and determine the laws of social change with mathematical exactness, we should accept selves, as there, in the same sense in which we accept physical objects. They would be guaranteed by their sciences. For in the practise of thought, we are as convinced as the Greeks that exact knowledge assures the existence of the object of knowledge.

It is evident that the assumption of the self as given by social science in advance of introspection would materially and fundamentally affect our psychological practise. Consciousness as present in selves would be given as there, outside the field of introspection. Psychological science would have to presuppose selves as the precondition of consciousness in individuals just as it presupposes nervous systems and vascular changes. In actual psychological analysis we should condition the existence and process of states and streams of consciousness upon the normal presence and functioning of these selves, as we condition the appearance and functioning of consciousness upon the normal structure and operation of the physical mechanism, that our psychology presupposes.

In a manner we do this in treatises on mob-psychology, in such a treatise on social psychology as that of Cooley's "Human Nature and the Social Order." McDougall's "Social Psychology" prepares the way for it in carrying back the processes of consciousness to social impulses and instincts—to those terms in which, somewhat vaguely, selves are stated in an evolutionary theory of society.

The economic man of the dismal science was an attempt to state the self in terms of an objective and exact social science. But fortunately the economic man has proved spurious. He does not exist. The economic man is as little guaranteed by the orthodox political economy, as *realia* were by the metaphysics of scholasticism.

Social science in anthropology, in sociology pure and impure, dynamic and static, has not as yet found its scientific method. It is not able to satisfactorily define its objects, nor to formulate their laws of change and development. Until the social sciences are able to state the social individual in terms of social processes, as the physical sciences define their objects in terms of physical change, they will not have risen to the point at which they can force their object upon an introspective psychology. We can to-day foresee the possibility of this. Eugenics, education, even political and economic sciences, pass beyond the phase of description and look toward the formation of the social object. We recognize that we control the

conditions which determine the individual. His errors and shortcomings can be conceivably corrected. His misery may be eliminated. His mental and moral defects corrected. His heredity, social and physical, may be perfected. His very moral self-consciousness through normal and healthful social conduct, through adequate consciousness of his relations to others, may be constituted and established. But without awaiting the development of the social sciences it is possible to indicate in the nature of the consciousness which psychology itself analyzes, the presupposition of social objects, whose objective reality is a condition of the consciousness of self.

The contribution that I wish to suggest toward the recognition of the given character of other selves is from psychology itself, and arises out of the psychological theory of the origin of language and its relation to meaning.

This theory, as you know, has been considerably advanced by Wundt's formulation of the relation of language to gesture. From this point of view language in its earliest form comes under that group of movements which, since Darwin, have been called expressions of the emotions. They fall into classes which have been regarded as without essential connection. Either they are elements—mainly preparatory—beginnings of acts—social acts, *i. e.*, actions and reactions which arise under the stimulation of other individuals, such as clenching the fists, grinding the teeth, assuming an attitude of defense —or else they are regarded as outflows of nervous energy which sluice off the nervous excitement or reinforce and prepare indirectly for action. Such gestures, if we may use the term in this generalized sense, act as stimuli to other forms which are already under social stimulation.

The phase of the subject which has not been sufficiently emphasized is the value which these truncated acts, these beginnings of inhibited movements, these gestures, have as appropriate stimulations for the conduct of other individuals. Inevitably, forms that act and react to and upon each other come to prepare for each other's reaction by the early movements in the act. The preliminaries of a dog or cock fight amply illustrate the sensitiveness of such individuals to the earliest perceptible indications of coming acts. To a large degree forms, which live in groups or in the relation of the animals of prey and those they prey upon, act upon these first signs of oncoming acts. All gestures, to whatever class they belong, whether they are the beginnings of the outgoing act itself or are only indications of the attitude and nervous tension which these acts involve, have this value of stimulating forms, socially organized, to reactions appropriate to the attack, or flight, or wooing, or suckling, of another form. Illustrations are to be found in hu-

man conduct, in such situations as fencing, where one combatant without reflection makes his parry from the direction of the eye and the infinitesimal change of attitude which are the prelude to the thrust.

Gestures then are already significant in the sense that they are stimuli to performed reactions, before they come to have significance of conscious meaning. Allow me to emphasize further the value of attitudes and the indications of organized preparation for conduct, especially in the change of the muscles of the countenance, the altered breathing, the quivering of tense muscles, the evidence of circulatory changes, in such minutely adapted social groups, because among these socially significant innervations will be found all these queer organic sensations about which the consciousness of the self is supposed to gather as a core.

Human conduct is distinguished primarily from animal conduct by that increase in inhibition which is an essential phase of voluntary attention, and increased inhibition means an increase in gesture in the signs of activities which are not carried out; in the assumptions of attitudes whose values in conduct fail to get complete expression. If we recognize language as a differentiation of gesture, the conduct of no other form can compare with that of man in the abundance of gesture.

The fundamental importance of gesture lies in the development of the consciousness of meaning—in reflective consciousness. As long as one individual responds simply to the gesture of another by the appropriate response, there is no necessary consciousness of meaning. The situation is still on a level of that of two growling dogs walking around each other, with tense limbs, bristly hair, and uncovered teeth. It is not until an image arises of the response, which the gesture of one form will bring out in another, that a consciousness of meaning can attach to his own gesture. The meaning can appear only in imaging the consequence of the gesture. To cry out in fear is an immediate instinctive act, but to scream with an image of another individual turning an attentive ear, taking on a sympathetic expression and an attitude of coming to help, is at least a favorable condition for the development of a consciousness of meaning.

Of course the mere influence of the image, stimulating to reaction, has no more meaning value than the effect of an external stimulus, but in this converse of gestures there is also a consciousness of attitude, of readiness to act in the manner which the gesture implies. In the instance given the cry is part of the attitude of flight. The cry calls out the image of a friendly individual. This image is not merely a stimulus to run toward the friend, but is merged in the consciousness of inhibited flight. If meaning is consciousness of

attitude, as Dewey, Royce, and Angell among others maintain, then consciousness of meaning arose only when some gesture that was part of an inhibited act itself called up the image of the gesture of another individual. Then the image of the gesture means the inhibited act to which the first gesture belonged. In a word, the response to the cry has the meaning of inhibited flight.

One's own gestures could not take on meaning directly. The gestures aroused by them in others would be that upon which attention is centered. And these gestures become identified with the content of one's own emotion and attitude. It is only through the response that consciousness of meaning appears, a response which involves the consciousness of another self as the presupposition of the meaning in one's own attitude. Other selves in a social environment logically antedate the consciousness of self which introspection analyzes. They must be admitted as there, as given, in the same sense in which psychology accepts the given reality of physical organisms as a condition of individual consciousness.

The importance for psychology of this recognition of others, if thus bound up with the psychology of meaning, may need another word of emphasis. Consciousness could no longer be regarded as an island to be studied through parallel relations with neuroses. It would be approached as experience which is socially as well as physically determined. Introspective self-consciousness would be recognized as a subjective phase, and this subjective phase could no longer be regarded as the source out of which the experience arose. Objective consciousness of selves must precede subjective consciousness, and must continually condition it, if consciousness of meaning itself presupposes the selves as there. Subjective self-consciousness must appear *within* experience, must have a function in the development of that experience, and must be studied from the point of view of that function, not as that in which self-consciousness arises and by which through analogical bridges and self-projections we slowly construct a hypothetically objective social world in which to live. Furthermore, meaning in the light of this recognition has its reference not to agglomerations of states of subjective consciousness, but to objects in a socially conditioned experience. When in the process revealed by introspection we reach the concept of self, we have attained an attitude which we assume not toward our inner feelings, but toward other individuals whose reality was implied even in the inhibitions and reorganizations which characterize this inner consciousness.

If we may assume, then, that meaning is consciousness of attitude, I would challenge any one to show an adequate motive for directing attention toward one's attitudes, in a consciousness of things that

were merely physical; neither control over sense-perception nor over response would be directly forwarded by attention directed toward a consciousness of readiness to act in a given situation. It is only in the social situation of converse that these gestures, and the attitudes they express could become the object of attention and interest. Whatever our theory may be as to the history of things, social consciousness must antedate physical consciousness. A more correct statement would be that experience in its original form became reflective in the recognition of selves, and only gradually was there differentiated a reflective experience of things which were purely physical.

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ATTENTION AS SENSORY CLEARNESS

I HAVE elsewhere maintained that the analytical study of attention must center about the sensory attribute of clearness or vividness. This doctrine has, no doubt, to run the gauntlet of many critical objections, and to submit to many and varied experimental tests; it is sharply at variance with the current trend of attentional theory. Professor Woodworth, for instance, has recently written that "attention offers no genuine problem to the descriptive psychologist; the questions which it raises are of a dynamic or of a physiological nature."[1] He affirms also that the "attempt to describe the consciousness of a moment as made up of the clear and the unclear leads to a curious paradox."

I shall try, in the present note, to clear up this paradox; I think it can be shown that paradox arises only if the descriptive point of view is forsaken for the dynamic, and that it is therefore of Mr. Woodworth's own invention, and not intrinsic to my account of attention. Parenthetically, I would remark that it is not correct, from my standpoint, to describe any attentive consciousness as made up of the clear and the unclear, unless these terms are understood in a purely relative sense. I regard the attribute of clearness as an intensive attribute, so that the focal processes in attention are simply the more clear, and the marginal processes the less clear; but every sensation has some degree of clearness, just as every sensation has some degree of intensity.[2]

Mr. Woodworth's paradox, now, is expressed in the following

[1] This JOURNAL, Vol. VI., p. 694.

[2] See my "Feeling and Attention," 1908, 10 f., 26, 183 f., etc.; "Text-book of Psychology," I., 1909, pp. 53 f., 278 f. For simplicity's sake I speak here only of sensation; clearness attaches also to the image ("Text-book," p. 198) and to complex sensory and imaginal processes.

sentence: "To reach a distinction between the clear and the unclear, each of them must receive some measure of attention; but the unclear is just that which is not attended to, and this precludes the making of the distinction." It seems obvious that, in this sentence, attention is taken dynamically, as something given to, bestowed upon, directed towards the sensory contents of consciousness. But suppose that for clearness I substitute a coordinate intensive attribute of sensation,—intensity itself, or duration, or extension. Then the sentence might read: "To reach a distinction between the strong and the weak, each of them must receive some measure of intensification; but the weak is just that which is not intensified, and this precludes the making of the distinction." Is any reader inclined to take this argument seriously? Then neither should he take Mr. Woodworth's paradox as a serious argument against my view of clearness. For on that view clearness is attention; degree of clearness is degree of attention; to separate attention from sensation is on a par with separating intensity or duration or extension from the sensations of which they are constitutive attributes. The paradox appears only if such a separation is made; it is the result of reading a dynamic interpretation into a bit of descriptive psychology.

There is, however, another form of the objection which it may be worth while to meet. I have put clearness on the same level with intensity, duration, and extension. But, it might be urged, we judge and report upon these attributes in the state of attention; experiments that deal with them presuppose a maximal attention, a maximal degree of clearness in the sensations; in what state, then, do we judge and report upon clearness itself? Must not any degree of clearness, high or low, be made focal in consciousness if we are to take introspective account of it? Must we not, in other words, attend to attention, if we are to have a quantitative psychology of clearness?

The reply to this objection is, I think, twofold. First, if we approach it from the side of the intensive attributes other than clearness, we must note that judgments of intensity, etc., are possible under distraction, that is, in a state of submaximal attention; the judgments are, of course, less accurate than those ordinarily passed in experimental work, but psychologically they are true judgments. It is not necessary, therefore, that intensity, duration, and extension be maximally clear in order to be judged,[3] though there is un-

[3] Indeed, the phrase "maximal attention" really begs the question. When we demand maximal attention, we demand in reality the highest degree of clearness attainable under the conditions of the experiment; and there is no guarantee that this degree is strictly maximal. See "Text-book," p. 295.

doubtedly an optimal range of clearness within which they prove, when comparison is made with the relations obtaining among their stimuli, to be judged most accurately. In any case, however, it is the intensity, duration, or extension itself, and not the concomitant degree of clearness, that touches off the intensive, temporal, or spatial judgment; all that variation in attention can do is to modify the judgment in a quantitative way. Secondly, and from the side of clearness, the argument may be met by the reports of observers who are called upon actually to estimate degrees of attention. There is no hint in these reports of any "attention" to "clearness"; and subsequent questioning brings out explicitly the identity of the mechanism of judgment in the various cases. Processes are given in consciousness as more or less clear, and the given degree of clearness touches off the judgment directly; degree of attention expresses itself in words, on the basis of clearness, without intervention or intermediation; it is with clearness precisely as it is with intensity and the rest. And, further, just as there is an optimal range of clearness for judgments of intensity, etc., so also is there an optimal range of intensity, duration, and extension for judgments of clearness; and just as the intensive judgment may be modified quantitatively by an unfavorable degree of clearness, so may judgments of clearness be modified quantitatively by unfavorable intensity, duration or extension. We have as yet very few experiments that are definitely directed upon the clearness attribute; but these statements follow of necessity from well-known experimental studies of the attentive consciousness.

It seems, then, that the objection in this form may be satisfactorily met. There remains the very difficult and attractive problem of recollection, of the voluntary recall of degrees of clearness. An obscure process, actually present, documents itself in judgment as obscure; of this we have experimental evidence. But what if I seek to recall the process at some later time? Then its obscurity becomes focal—and that statement looks like a contradiction in terms. The fact is, however, that under these circumstances processes which are now focal and therefore clear act as surrogates for the obscure process of the past; certain present and clear processes mean or intend a past process that, when present, was obscure. There is, I believe, no doubt of the formal accuracy of this statement; but I am not yet able to go into details. What the substitutive processes are, whether there is any special group of such processes, and how in conscious terms they mean the obscure event which they stand for, these are questions for further experiment to answer.

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DISCUSSION

A DISCLAIMER

THE too flattering notice of myself by Professor James, in this JOURNAL (January 20), contains a statement which I think I should ask leave to correct. Professor James credits me with "breaking loose from the Kantian tradition that immediate feeling is all disconnectedness." But all that I have really done here is to follow Hegel. In this and in some other points I saw long ago that English psychology had a great deal to learn from Hegel's teaching. To have seen this, and to some extent to have acted on it, is all that common honesty allows me to claim. How far Hegel himself in this point was original, and how again M. Bergson conceives his own relation to post-Kantian philosophy, are matters that here do not concern me. I write merely to disclaim for myself an originality which is not mine. It belongs to me no more than does that heroical perversity or perverse heroism with which also I find myself credited.

F. H. BRADLEY.

A CORRECTION

TO THE EDITOR OF THE JOURNAL OF PHILOSOPHY,

DEAR SIR: The critical parts of Professor Montague's review of my "Pluralistic Universe" in your number of March 17, have such a crushing sound that, in order that careless readers may not suppose me quite annihilated, I am tempted to make brief reply.

My lecture on the "compounding of consciousness" was an incident in my attempt to refute absolutism, and placed itself explicitly on idealistic ground. In a world of mere "consciousness" (or of purely "subjective states") I asked, "how can parts and whole be numerically identical, when their 'content' is so different in form?" Dr. Montague seems to forget this entirely, and when he brings in a "realistic" world of independent objects and witnesses as the solution (pp. 148–9) he forgets with equal completeness that I (on pp. 200–3 of my book) indicate exactly that view as one possible solution.

My book doesn't even enter into the general question of how subjects know objects. I have treated of mediate knowledge in "Pragmatism" and in the "Meaning of Truth," of immediate knowledge (or direct perception) in the early article in this review ("Does Consciousness Exist?") to which Dr. Montague briefly refers. If he wishes to demolish my epistemology I beg him to take those writings as his objects of attack.

I say nothing of my critic's remarks on the logic of the Achilles,

etc. Perhaps if he were to spread them out more fully, I should find them easier to apprehend.

Sincerely yours,
WM. JAMES.

CAMBRIDGE, MASS.

AN EXPLANATION

I AM extremely sorry if in my review of "A Pluralistic Universe" I gave a false impression of its author's position with respect to the points mentioned in his letter. Professor James charges me with "forgetting completely" that on pages 200–8 of his book he has "explicitly" put forward the theory which I accept as a satisfactory solution of the collective-distributive puzzle. Now after several rereadings of these pages I am unable to find any statement of the theory which I defended, that I should regard as adequate. I do find at the bottom of page 200 a statement that many witnesses can know the same object, which would seem to be explicitly identical with my view; but in the next paragraph at the top of page 201, I find this view interpreted as implying that the fields of the several consciousnesses are distinct entities and that the common object of their knowledge lies beyond them, which is decidedly different from the view that I maintained. Moreover on page 206 the author says of this point of view "how can one and the same objects appear so variously? Its diverse appearances break it into a plurality; and our world of obejcts then falls into discontinuous pieces quite as much as did our world of subjects." And again (page 207) "In my heart of hearts, however, I knew that my situation was absurd and could only be provisional." Inasmuch as I had contended in my article that the absurdity which Professor James charges against this view depended solely on his interpreting the many witnesses as necessarily having distinct rather than overlapping fields of consciousness, thus implying a dualism between the field of consciousness and the object known, I can hardly feel that the passages to which Professor James refers contain an "explicit statement" of my own position, which it was incumbent upon me to recognize.

To Professor James's protest that I forgot that he was addressing himself to idealists and speaking from the idealistic standpoint, in pressing home the difficulty of identifying a distributively known and a collectively known object—I can only reply that I got and still get overwhelmingly the impression that he is speaking not as an idealist to idealists, but in his own person and voicing his own opinions when he says "I must in short bring back distinct spiritual agents . . . or else I must squarely confess the solution of the problem im-

possible, and then either give up my intellectualistic logic . . . or, finally, face the fact that life is logically irrational. Sincerely, this is the actual trilemma that confronts every one of us'' (p. 208). Now it is on the basis of this trilemma that the defense of Bergsonian irrationism is based. If it is as Professor James's letter seems to me to imply, a trilemma that applies merely to the idealist, why should he feel concerned in his book to escape from it by accepting the new logic? And why, too, if it applies merely to the idealist, should he state that it is ''the trilemma that confronts every one of us''?

It may be, however, that I have somehow misunderstood the purport of his letter, and I offer the above not merely as a defense but as an *amende*.

W. P. MONTAGUE.

COLUMBIA UNIVERSITY.

SOCIETIES

THE EIGHTEENTH ANNUAL MEETING OF THE AMERICAN PSYCHOLOGICAL ASSOCIATION

THE American Psychological Association convened in Cambridge the last three days of 1909. Many former Harvard men were present and a good representation of the association membership was evident at the opening meeting in Emerson Hall, where, at the close of the morning session, Professor Münsterberg, on behalf of the Harvard department, extended an informal welcome. Unusual facilities for the accommodation of the visiting psychologists had been provided and the psychological laboratory was thrown open for inspection during the entire time of the meetings. The annual social event following the president's address was made more enjoyable this year through the courtesy of Professor Münsterberg, who invited the association to his home for the occasion.

The program for the meeting was replete, containing forty-five names of speakers. In addition to the usual number of papers in the general field of psychology, special attention was given to abnormal psychology, animal psychology, and the methods of teaching psychology, each of which topics occupied the whole or greater part of an entire session.

Not only the largest attendance, but the most animated discussion occurred on Wednesday afternoon, when psychoneurotic phenomena were the subject for consideration. The animus for the program was undoubtedly Freud's recent visit to this country, and the discussion centered about his theories. The fray began with an exposition of Freud's theory of the unconscious by Mr. Putnam.

According to Freud there is in many persons, in addition to the normal mental life developed on socially conventional lines, a secondary stream of psychosis whose origin is primarily in the sex-instinct. The social requirements of mental development suppress the normal outlet of this secondary stream and the instinctive attempt to find an outlet results in an ill-regulated education of this lower mental level. The growth of this level goes on, however, without conscious awareness, but with important consequences to mental life. The lower stream does not always remain hidden, but thrusts itself momentarily into the conscious field. The speaker insisted that this secondary life is entitled to a name and contended that the terms "unconscious," "subconscious," "vorbewusst," were appropriate. The rationality of the Freudian view Mr. Putnam sought to show by a comparison with Bergson's view of the relationship of bodily and mental processes in normal life. Both Bergson and Freud indicate that conscious awareness is not an essential feature of productive mental life.

Freud's application of his theory to the case of dreams was set forth by Mr. Jones. Dreams are directly continuous with the rest of mental life and are explicable as the results of well-defined causes. Dreams have a double content, one part "manifest" and the other "latent." The latent content can be discovered only by psycho-analysis. The application of this method always reveals the dream as the imaginary fulfilment of a wish, whose nature has been such that the subject has forcibly repressed it from the conscious field. When the censor has been removed by sleep, the distorted wish works itself out. On this theory, the study of dreams becomes the most valuable means of access to the deeper phases of personality.

Mr. Boris Sidis in a paper on "The Fundamental States in Some Forms of Psychoneurosis" opposed the Freudian view as to the sexual character of these phenomena, the essential trait of which is the systematic character of the manifestations. The system tends to develop into a parasitic personality foreign to the patient and recurs with such periodicity as to be described as recurrent mental states. The fundamental causes of these states it was held are the experiences of early childhood, such as mental trauma, emotional shocks, etc. Psychoneurotic states of fear are due to the primitive fear of the unfamiliar and an overdeveloped sense of the mysterious, cultivated in early life by social, moral, and religious training.

The discussion precipitated by these papers was vigorous and prolonged. Hall, Prince, Putnam, and Jones, all of whom seemed to accept the Freudian theories either as to result or method, argued that we have here an avenue of psychological investigations that promises much for the future study of the more complex mental

states. Scott, Sidis, and Whipple were skeptical of the psychoanalytic method for the study of dreams, pointing out the great danger of the experimenter influencing by suggestion the "latent mental content" to be revealed. At another time in the meeting Mr. Scott reported a series of tests made by the standard methods of studying suggestibility. The use of two "ideal" methods resulted in a zero coefficient of correlation from which he concludes that there must be made a new analysis of the factors involved. It was these data which led him to enter his objection to Freud's method.

The growing importance of animal investigations appeared in the Thursday morning program, which, with the exception of two papers at the close, was devoted to the subject. Mr. Cole reported a study of color vision in the raccoon by modification of the Kinnaman method. The essential change in the apparatus was in clamping the food glasses with their tops immediately beneath a horizontal board so that the animals could not feel or see into the glasses before choosing. A second improvement over the Kinnaman method was the great number of check experiments used to insure that the animals were really depending on the single visual factor of color. The raccoons discriminated the food glass about ninety per cent. of the time. Discussion of the paper conceded that this was one of the most thorough studies of color vision yet made and seemed practically to exhaust the possibilities of the use of pigmented papers. Those interested will be glad to learn that it is now proposed to test the raccoon further by the Watson-Yerkes spectral light apparatus.

An investigation on the visual motor coordination of the rat was reported by Miss Richardson. The device used was a jumping apparatus adjustable to different heights and distances. The animals seemed able to land on the platform only when the conditions were such that visual perception of the platform was not required. Reliance was mainly upon the motor impulses. The work is an interesting confirmation of Watson's work on kinesthetic sensations.

A third study of animal vision—this time on the size discrimination of the dog—was reported by Mr. Yerkes. The apparatus used was an improved form of the brightness device previously used in the Harvard laboratory. The work was done by Mr. Haggerty on a Cocker spaniel. The report dealt chiefly with the development of methods of handling the animal in the effort to force dependence on size to the exclusion of other stimuli. The results so far obtained point to the animal's ability to discriminate a circular area four and a half centimeters in diameter from one six centimeters in diameter.

Preliminary experiments on anthropoid apes were reported by Mr. Haggerty. Two orangs and a chimpanzee were tested at the

New York Zoological Park by the problem method. The devices were adapted from Hobhouse and the results, while not extensive, tend to show (*a*) a remarkably fertile field for the investigation of animal intelligence; (*b*) a definite and precise limitation of the sense-impulse theory of animal learning; (*c*) a greater rôle for imitation than among any of the lower species of primates.

In addition to the four investigations, place was found on the program for one paper of a more general nature. Mr. Burnham proposed a "Working Hypothesis for Animal Psychology." The essential part of the hypothesis is that there has been not only an evolution of total mental states, but that each sort of mental state has had its own particular development. Thus there are not only levels of intelligence, but rather levels of the evolution of perception, of memory, of judgment, etc. In the human mind we have not a hierarchy of faculties, but a hierarchy of stages in the development of each fundamental process.

On Thursday afternoon the Committee on Methods of Teaching Psychology made its report. Abstracts of the work of the committee had been distributed earlier and the time was occupied by comment on specific phases of the report by the persons who had had the report in charge. The fact that the discussion was participated in by Seashore, Whipple, Calkins, Sanford, Pillsbury, Baird and Warren indicates the degree of interest the leaders of the field are taking in the pedagogy of the subject. The discussion showed that the most diverse aims and methods now prevail in different institutions, that everything from physics to metaphysics is taught in the name of psychology with the consequent misfortune that students are confused and the subject too often discredited as a part of an educational curriculum. The report is positive in character, replete with practical suggestion for normal schools, colleges without laboratories, and colleges and universities having laboratories. Printed copies are to be distributed to all members of the ASSOCIATION and the report will go far toward giving psychology its proper place and dignity in the realm of educational disciplines. Two other papers during the meeting dealt with methods of teaching, one by Mr. Hylan on "An Instance in Intensive Teaching of Psychology" and a second by Mr. Warren on "The Form of the Color Pyramid."

Educational psychology shared in the program with three papers. Mr. W. F. Dearborn reported an investigation of the eye movements in children's reading. Photographic records of these movements were regarded as an index of the attention span and are thus superior to tachistoscopic tests. They thus furnish an indication of the pupil's progress in learning and the value of a pedagogical method.

Mr. Arnold had studied the mental retardation of children by three methods. The child's breathing was obstructed by a plug in the nostril and was then tested with simple mental tasks. Efficiency decreased with the obstruction. Tests on children with defective eyesight showed that while poor eyesight was physiologically harmful it was not pedagogically so. Further tests showed that the ignoring of individual differences in school gradation was an automatically working cause of retardation.

A paper by Miss Theodate Smith discussed a set of collected observations on the sense of shame in animals and children with the conclusion that the development of shame in the phylogenetic and ontogenetic scale coincides with the development of self-consciousness.

However, the special emphasis given to particular interests did not eclipse the attention to normal human psychology. In this field there were six papers, five of them reporting extended experimental work, and one a bit of introspection on the type of ideation. The latter was by Mr. Colvin and set forth his own ideational type as being a marked case of the motor variety, a form which he called mimetic, owing to the tendency to make actual movement when sensation or image is present.

The tactual estimation of filled and unfilled spaces has been newly attacked by Miss Cook, who has conducted a three-part investigation. In the first part a filled and an unfilled space were placed successively on the same surface; in the second part, the spaces were placed simultaneously on adjacent parts of the forearm; and in part three the spaces were presented successively but in the same relative position as in part two. All filled spaces were underestimated in the first part and overestimated in the second, while the illusion practically disappeared in the third part. In the second sort of illusion the subjects either judged the total impression of the filled space or localized the end points, the illusion being the stronger in the first case. The experimenter thinks the displacement a phenomenon of attention. In experiments of the third type, the slight illusion that appeared was an overestimation in the case of subjects who judged by immediate impression and an underestimation by those who relied upon localization. The same illusion appeared in the case of two blind subjects and it is concluded that the illusion is truly tactual.

In discussion Mr. Münsterberg pointed out that the results did not contradict those of Rieber which showed that the tactual illusions correspond to the visual.

Mr. Carr read a paper on "The Autokinetic Sensation," giving the results of extended experimentation. Eye movements do not occur when the fixation point remains with the light, but they do occur when the fixation point remains apparently stationary and the

light moves away from the point. The velocity, extent, direction and regularity of the illusion are dependent on the position of the eyeball in the socket. Fatigue also is a factor and the illusion holds for a foveal negative after-image, but no correlation was found between the aspects of the illusion and the bulbular twitchings. This last result tends to disprove the integration theory of the illusions.

Mr. Pillsbury presented a new phase of the attention wave problem. The fluctuations of a minimal stimulus are not longer to be regarded as true attention waves. The experiments were made by Messrs. Work and Billings with a view to measure the period during which one might attend to a supraliminal stimulus. The average length of attention for fourteen subjects was from 1.2 (with m.v. of 4) to 4.2 (m.v. 1.2) seconds and for three other subjects .98 to 2.4 seconds based on a thousand results. The results seem to indicate the time that any impression may be held before consciousness without change.

Progress in determining the nature and cause of the galvanic phenomena has been made by experiments reported by Mr. Boris Sidis. As to its nature the results confirmed the author's previous contention that the phenomenon is due to the generation of an electromotive force under the influence of sensory stimulation and affective states. In the experiments, the skin secretions, circulation, and effects of the sympathetic and central nervous systems were eliminated as possible causes, and the phenomenon seems to be of muscular origin.

The popular belief that color-blindness is rarer among women than among men is put seriously in question in a study by Mr. Hayes on 457 college women. The results of tests with Nagel cards show color deficiency in 104 of the number. Twenty-three of these were further examined in the laboratory, with the result that two were found to be color-blind, four others almost if not wholly so, and the remaining 17 showed marked deficiency in ability to discriminate colors. In many cases marked differences in the two eyes were discovered.

Twice during the meeting questions of psychological theory came to the fore, once during the president's address and again in a paper by Mr. Mead on "What Social Object Does Psychology Presuppose?" Both speakers dissented from the generally accepted doctrine that introspection into a private consciousness is the only legitimate procedure for psychology. The thesis defended by Mr. Judd in his address on "Consciousness and Evolution" was that "the concept of consciousness is most productively utilized in science when it is treated as a cause. It determines by its present organization the mode of future action." This view accepted, "the study

of the relations of conscious processes to the environment and to the other inner functions of the human individual becomes the legitimate work of the science of psychology. Psychology thus becomes the science of the function of consciousness in the world rather than a mere introspective account of the various elements of conscious states.'' On this view psychology acquires a field of objective study. This thesis, which is not new in Mr. Judd's speculations, was founded upon an historical statement of the evolutionary process made to show that the course of evolution has not been free from the determining influence of conscious processes, that language and art are not to be understood as biological phenomena, and that not biology, but psychology must be the basis of the social sciences.

Quite in the same spirit Mr. Mead held that the self of introspection was not the basis for the recognition of external selves, but that these latter are logically preexistent to the former. Selves are social objects which psychology must presuppose as definitely as it presupposes the physical object—the physical organism and its nervous system. The social sciences must state the conditions under which self-consciousness is possible rather than that self-consciousness should create in a solipsistic way the selves it will recognize.

Other papers offered by title only were by Messrs. Dunlap, Stratton, Wells, Porter, Franz, Ferree, Burnett, G. V. N. Dearborn and Lough. Mr. Whipple demonstrated two instruments for brightness discrimination, a pressure-pain balance and forks for pitch discrimination. A new pendulum chronoscope was described by Mr. Twitmyer.

Mr. Pillsbury was made the new president, and Messrs. Lindley and Yerkes were elected to the council for a period of three years each. The 1910 meeting will be at Minneapolis.

M. E. HAGGERTY.

INDIANA UNIVERSITY.

REVIEWS AND ABSTRACTS OF LITERATURE

Esthetics. KATE GORDON. New York, Henry Holt & Co. 1909. Pp. 315.

In the field of esthetics only one thing is more conspicuous than the lack of teachers of all-around competency, and that is the dearth of elementary text-books. Treatises, monographs, and essays abound, but the beginner, seeking a broad, illuminating survey of the problems and answers in the philosophy of art, must trust to lectures or else go beyond the English language; and, if the latter, who will assure him success? Neither of the two books which have aimed to supply his demand—to wit, Santayana's " Sense of Beauty " and Puffer's " The Psychology of Beauty " —has stood the test of class-rooms. They score on very different targets;

each handles some aspects of esthetics, but no more, and each frequently becomes too special or too profound for the undergraduate who is taking his first dip. All this makes Miss Gordon's volume a noteworthy contribution, inasmuch as its harshest critic must confess that, first of American works, it possesses the fundamental virtues of an introduction. It outlines the entire field of esthetics. Its style is simple and declarative. Controversy is not heard in it. Obscure issues are not raised. There are many clear examples and a number of figures. And each chapter closes with a well-selected cluster of reading references. If there is any structural defect worth mention, it is probably the enumeration of special forms: thus, Miss Gordon names and comments briefly upon each rhythm-type, she gives a short history of the dance and follows it with a sketch of the religious dances of the Middle Ages, the pavan, the gavotte, the minuet, the pas de basque (to which she devotes a page), and finally three pages on the principles of posture and movement, all of which principles must be taught in dancing-school but have no place in a course on esthetics, being nothing more than rules of poise and manipulation. While there is the same tendency to descriptive detail in the chapter on The Character of Simple Lines and Forms, it here enjoys a much sounder excuse; the details are not rules for draughtsmen or a catalogue of geometrical species, but rather a most useful account of the immediate esthetic effect, the suggestiveness and the manner of employing artistically lines, figures, and patterns.

A text-book should not be criticized for the theories on which it has been built, except in so far as these mar the presentation of the subject to the student's eyes. Miss Gordon advances many propositions about which the fire of doubt burns fiercely; take, for instance, her assertion that "the appreciation of nature is derived from the appreciation of human art products," or that "criticism may be called the esthetics of particular cases," or that emotion is representative, or that magic is an incentive to the imitative impulse (instead of being a by-product of that same impulse). Whether these opinions can win their fight or not need not concern him who is looking for a good text-book; they are stated frankly, simply, and undogmatically by Miss Gordon, and the worth of the book does not hang in the slightest upon them. It is the mass of admirably chosen facts and their clear ordering that count; and they promise Miss Gordon's production a long and successful career.

WALTER B. PITKIN.

COLUMBIA UNIVERSITY.

Augaben und Ziele des Menschenlebens. DR. J. UNOLD. Leipzig: B. G. Teubner. 1908. Pp. vi + 142.

The book is a plea for supplanting religious instruction in the schools (particularly those of Germany) by a course of training in scientific ethics. Dr. Unold deplores the tendency of the German government to increase the hours of religious instruction in the schools with the hope of counteracting the degeneration of morals which has followed the loss of religious faith in the mass of the people. The emancipation from religious au-

thority Dr. Unold regards as a step in advance in ethical progress. He points out the fact that the ethics of religion depends upon external authority, which the individual is constrained to obey by a system of arbitrary rewards and punishments. Though he recognizes the usefulness of such a stage of ethical development in establishing social habits, he believes that it is already outgrown. The remedy for the degeneration of morals (the reality of which he does not question) he finds not in the attempt to force the people back into religious restraints, but in the thorough ethical instruction of the young.

The course of ethical training which Dr. Unold outlines comprises a theory of ethics which is to be classed as a type of perfectionism. Ethical conduct consists in a conscious striving toward the purposes of life revealed in organic evolution, in the development of social organization, and finally in the history of human culture. From the first two sources he derives two fundamental practical ends of existence: (1) the maintenance of the race by means of the preservation, adaptation, and reproduction of the individual, (2) the development of the greatest possible degree of variety, and of efficiency in both the race and the individual. The attempt to realize these ends constitutes the practical duties, such as the preservation of individual health, public hygiene, the production and care of children, rational choice in marriage, obedience to the common laws of state and society, and the education of the youth to social service. These laws of the merely practical realm of conduct are safeguarded, and their fulfillment in part insured, by the fundamental laws of the organic world, and of human society. Their violation necessarily results in harm to the individual, and to society. If the youth asks why he ought to strive to conform to these rules of conduct, it is a sufficient answer to point out the inexorable nature of the connection between the transgression and the punishment when they are violated. A youth who fully understood this connection would need no further restraint in the form of heaven and hell.

The third and highest end of conduct is revealed in the history of human culture. It alone transcends the practical, and deserves to be called ethical. This end Dr. Unold defines as the perfecting (Vervollkommnung) of the various kinds of progress to be found in the history of culture, namely, (1) intellectual-scientific, (2) artistic-literary, (3) technical-commercial, (4) political-social, and (5) ethical-religious. Progress in the ethical-religious field is given a special name—the process of ennobling (Veredlung)—and is treated in detail. The ennobling of the race is a threefold process, consisting of (1) humanizing (development of intellect, refining of feeling and discipline of the will), (2) individualizing (the production of exceptional personalities), and (3) socializing (the development of a sense of national loyalty and social solidarity). The highest end of conduct he accordingly states as follows: "The production of an intelligent and noble personality, which shall devote itself consciously and with enthusiasm to the cause of social-commercial, national-political, and universal-human progress."

But the youth who asks why he ought to strive toward the realization of the highest end of conduct is not so easily answered as in the case of

the practical ends. The development of a noble personality is an end which is set by the course of self-determined conscious activities, and which lacks the binding force of natural law. Dr. Unold concludes that the ethical ideal must depend for its motive power upon an act of faith on the part of the individual—faith not in a supernatural power, but in the power of the individual intellect to understand, and of the individual will to fulfill, the laws of life. It should be one of the first objects of early education to instill such a faith in human might and in human destiny.

The book closes with a discussion of eudæmonism, and utilitarianism. The former doctrine is ranked lower in the ethical scale than the latter, but both are regarded as confined to the limits of the merely practical.

The manner of presentation is clear, simple, and untechnical, and there are numerous summaries which make the argument easy to follow. The book contains a mass of suggestive detail to which no justice can be done in a brief summary.

HELEN THOMPSON WOOLLEY.

CINCINNATI, OHIO.

JOURNALS AND NEW BOOKS

THE PHILOSOPHICAL REVIEW. January, 1910. *Perception and Physical Reality* (pp. 1–21): J. A. LEIGHTON. – Physical reality in the complex content of actual and possible perceptual experience. The reality of perception logically involves the thoroughgoing interdependence and correlation of perceptual object and percipient mind. *The Self* (pp. 22–33: FRANK THILLY. – The self exists. It is experienced. It is what is aware of states, owns them, recognizes them, remembers them, connects them, assumes attitudes toward them. No philosophy or psychology can afford to ignore the self as a part of experience or dissolve it into a mere sum of states. *The Schematism in Baldwin's Logic* (pp. 34–52): C. H. WILLIAMS. – Professor Baldwin emphasizes the experimental character of thought, but differs from pragmatism in maintaining that the true universal is something beyond the hypothetical general (or schema), and that it exhibits fixed and determined knowledge. This position may be criticized as creating a false dualism between the "as of general" and the true general, or at bottom between percept and concept. Professor Baldwin's schematic method is not new, but is a thorough working out of the old method of hypothesis and proof. *The Notion of the Implicit in Logic* (pp. 53–62): J. E. CREIGHTON. – The notion of the implicit is attacked as a fallacy in Baldwin's Genetic Logic. Idealists have abused the notion, but its legitimate use can not be dispensed with. *Reviews of Books:* William James, *The Meaning of Truth:* GEORGE TRUMBULL LADD. Ludwig Stein, *Philosophische Strömungen der Gegenwart:* HENRY W. STUART. F. Pillon, *L'année philosophique:* E. L. HINMAN. James Bisset Pratt, *What is Pragmatism?* GEORGE ROWLAND DODSON. *Notices of Books. Summaries of Articles. Notes.*

Bawden, Heath. The Principles of Pragmatism. New York and Boston: Houghton Mifflin Co. 1910. Pp. viii + 364.

Davenport, C. B. Eugenics: The Science of Human Improvement by Better Reading. New York: Henry Holt & Co. 1910. Pp. 35 + 7 pages of diagrams. $.50.

Davies, A. E. The Moral Life. A Study in Genetic Ethics. Baltimore: Review Publishing Co. 1909. Pp. xii + 187.

La Monte, Robert Rives (Socialist) and Mencken, H. L. (Individualist). Men *vs.* The Man. A Correspondence. New York: Henry Holt & Co. 1910. Pp. 252.

Leenhardt, F. L'Evolution: Doctrine de Liberté. Saint-Blaise et Roubaix: Foyer Solidariste. 1910. Pp. 154.

Samuelson, James. The Human Race. London: Swan, Sonnenschein & Co. 1910. Pp. xii + 192.

Stumpf von, Carl. Philosophiche Reden und Vortrage. Leipzig: J. A. Barth. 1910. Pp. 261. M. 5.

Volkert von, Johannes. System der Aesthetik. Band II. Munchen: C. H. Beck'sche. 1910. Pp. xxii + 569. M. 10.50.

NOTES AND NEWS

ACCORDING to *Science* for March 11, "the naturalists of France and of many other parts of the world are uniting in a jubilee celebration in honor of J. H. Fabre, styled by Charles Darwin 'the immortal Fabre,' and referred to by him also as 'that inimitable observer.' Fabre, after years of labor and of patient observation and of most important work, is, in his age, the most modest of men, leading a retired life, and his admirers everywhere and in all walks are uniting in this celebration. Not only are naturalists coming together for this jubilee, but prominent officials throughout France and prominent men in literature as well, since Fabre's published work possesses a high literary value. No one, says David Sharp, has ever written on his subjects with equal brilliancy and vivacity. So Mistral, the poet; Edmund Rostrand, the poet and dramatist, and Maurice Materlink, the naturalist, philosopher and novelist, among others, have united in this jubilee. Members of the French Academy engaged in other branches of science, such as Poincaré, and men prominent in many walks of life, not even excepting journalism, such as Hèbrard, the director of the *Temps,* have also associated themselves with Fabre's other admirers. The jubilee will be held on the third of April, at the time of the inauguration of the Institute of Oceanography by the Prince of Monaco. A medal will be struck in honor of the occasion. Americans wishing to contribute may send their subscriptions to Dr. L. O. Howard, permanent secretary of the American Association for the Advancement of Science, Smithsonian Institution, Washington, D. C. These should be sent at once, since the subscription closes the twenty-fifth of March."

THE paper, the abstract of which follows, was read by Miss M. E. Durham before the Anthropological Institute at its meeting on February

22. "High Albania is the only spot in Europe in which the tribal system exists intact. The tribes occupy the mountain land which forms the north-west corner of Turkey in Europe. They are exogamous, but male blood only counts. Each tribe is ruled by a council of elders, by ancient laws handed down by oral tradition, which are strictly enforced. Roughly, the tribes may be divided into three groups, one of which tells a tale of origin from Bosnia; the second, of partial origin from Rashia; while the third declares that it has "been there all the time." The tale of origin from Bosnia is confirmed by the fact that the tatoo patterns used by these tribes are used in certain districts of Bosnia. Among other very ancient customs, the Levirate is still practised, even by many of the Roman Catholic tribes. Blood vengeance is extremely prevalent throughout both Christian and Moslem tribes. Its rules are complicated. Up country, the houses are all stone Kulas (towers), built for defence, and having no windows, but only loopholes for rifles. Communal families of as many as forty members live together in one room, ruled by the house lord, who has often power of life and death over his subjects. Marriage is always by purchase, save for an occasional forcible capture. Children are betrothed in infancy. Thirteeen to fifteen is a common age for a girl's marriage, and fifteen to eighteen for a boy. Hospitality is the universal law of the mountain. The tribesman, if he receives a traveller at all, gives him of his best."—*The Athenæum,* March 5.

THE corporation and the board of overseers of Harvard University have created the department of university extension, and appointed in it the following officers Dean, Professor Ropes; members of the administrative board for 1909–10, Professor Ropes, Professor Royce, Professor Hanus, Professor Hart, Professor Moore, Professor Osterhout, Professor Hughes, and Professor Munro.

D. APPLETON AND CO. announce for spring publication a new edition of the works of Herbert Spencer in eighteen volumes, and "The Psychology of Reasoning" by Professor W. B. Pillsbury, of the University of Michigan. Macmillan and Co. announce "The Religion of the Chinese" by J. J. M. De Groot.

DR. E. H. CAMERON, instructor in psychology in Yale University, has been advanced to the grade of assistant professor.

DR. F. S. BREED, at present engaged in work in comparative psychology at Harvard University, has been appointed instructor in psychology in Yale University.